SCIENTIFIC COMMERCIAL STANDARDS

A LECTURE

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BY

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OF

"Flashes From The Anvil of Thought"

"Common Sense on Money," Etc., Etc.

Compliments of
Alvin H. Low
Aug. 1, 1918

August 19, 1918.

Mr. Alvin H. Low,
1417 S. Hoover St.,
Los Angeles, Cal.

Dear Sir:

Please accept our sincere thanks for your gift to the library of your writings entitled "Common Sense on Money", also "Land, Money and Highways" besides other pamphlets. We should be glad to receive any other publications which you may issue in the future.

Very truly yours,

Librarian.

Scientific Commercial Standards

Mr. President, Ladies and Gentlemen:

A standard measure, like a standard of morals, is measured by itself "because there is none greater."

The difficulty of finding anything on earth or in the universe for that matter, that is so fixed and certain in its properties that it can be selected and established as an unvariable standard of length, of weight or of value, has baffled the skill of philosophers and scientists for all time past, and the war of the standards is as heated and merciless today as ever before. The proof of this is found in the accumulated literature on weights an measures, in our public and private libraries, and in the laws of the various states and nations of the world.

I doubt if the great mass of mankind, even those actively engaged in trade and commerce, realize the stupendous importance of the subject—the laws governing it, like the law of gravitation, acting so silently and often played with so stealthfully by those whose interests are not always identical with the public good, that all may be affected powerfully without perceiving the real cause of disturbance.

The importance of this subject was recognized by the framers of our National Constitution; for there in paragraph 5 of section 8 of article 1 of that great charter of our liberties it is provided that "The Congress shall have power to coin money, regulate the value thereof and of foreign coin and fix the standard of weights and measures."

The importance of fixed standards and the necessity for rigid conformity to them, is pointed out and emphasized in our earliest literature. Cheating in weights and measures was forbidden among the first laws given to the children of Israel while yet roaming in the wildernesss, and before reaching the promised land where trade and commerce were to become national characteristics.

"Thou shalt not have in thy bag divers weights, a great and a small. Thou shalt not have in thine house divers meas-

ures, a great and a small. But thou shalt have a perfect and just weight, a perfect and a just measure shalt thou have.''

What matter now what was the origin of their cubit or of their ephah? The length of the human foot as a unit of length was, I suppose, of later adoption and is an example of the uncertainty of a standard—since no two human feet are of exactly the same length and the measure by that name could at most only approximate the average length of human feet; to ascertain which to absolute certainty is utterly impossible. However, the origin of this measure is attributed to Greece, and is supposed to have been the exact length of the foot of the god Hercules. The purely scientific origin or equivalent of this measure, therefore, I cheerfully leave for others to find. The Olympic foot was, according to the best authorities, equivalent to 12.14 English inches. Not less than 292 variations have existed at various times in the use of this standard.

But what of the inch into which the foot is divided? The inch is quite as traditional a measure as the foot; though one historian assigns it to Roman origin, and its length at some time has been equivalent to the combined lengths of three grains of barley. The scientific certainty of this length being only approximated by the average of the lengths of a large number of grains.

The learned Scotch astronomer Piazzi Smyth, in his clever work ''Our Inheritance in the Great Pyramid,'' labors to show that that stupendous structure was erected under divine inspiration for the sole purpose of passing on to this and future generations a scientific standard of weights and measures, and that the inch corresponding closely with the British inch and equivalent to one five hundred millionth of the length of the earth's axis of rotation was the unit of length used in the building of the Great Pyramid. Smyth's theory, concurred in by some other scientists and investigators, is that a complete system of weights and measures is outlined by the Great Pyramid, based upon dimensions of the earth, its motions and distance from the sun.

The value of these conclusions is to me somewhat modified by the fact that they were promulgated during a heated controversy between the advocates of traditional standards, of which the British (and American) system is the epitome, and those of the French metric system, which its enemies denounced as atheistic in its conception and not even as scientific in its foundation as was claimed for it.

It is useless to burden this lecture with historical details of the variations in standards, further back than a hundred years, or about the beginning of the Nineteenth Century, more than

to point out the fact that at that time the inconvenience of the ruling standards, because of their great variety, and the injustice of them because of their instability, led to the invention of the metric system; initiated by the French government at the suggestion of Prince Talleyrand, the Bishop of Autun in 1790. "He recommended the length of the pendulum, beating seconds in latitude 45 deg. as a suitable linear basis and introduced into the National Assembly of France a decree embodying this proposition."

This led to the convening of an international commission composed of representatives of several European nations to determine the exact length of such pendulum. Later the system was further matured by a committee of the French Academy of Sciences. "Their report dated March 19, 1791, after considering the comparative fitness as a standard of length; of the pendulum and of the earh itself in some one of its natural dimensions; decided in favor of the latter and recommended as the standard unit of linear measure one-10,000,000th of the quadrant of a terrestrial meridian."

But this was only the beginning of the work; for it took seven years of arduous and skillful labor of two eminent surveyors to measure an arc of the meridian selected—that passing through Paris and extending from Dunkirk to Barcelona; the object being to ascertain with the greatest exactness the length of the linear base called the "meter." This having been done, a complete system was inaugurated, having the meter as the fundamental standard. Prototypes of the standards of length, capacity and weight were carefully constructed and placed for safe keeping in the public archives of France, June 22, 1799. A later international commission assembled at Paris in 1870, in which the United States was represented by Mr. Washburne, took further precautions towards the establishment and perpetuation of the system in pursuance of which a set of standards for the metric system were deposited in the International Burea of Weights and Measures at the Pavillion de Breteuil near Sevres. These consist of a meter, defined by the length at the melting point of ice between two lines drawn on a bar of platiniridium together with units of capacity and weight.

Prior to the Revolution the American colonies had generally made use of the same standards as those of the mother country, and which are in use still by sufferance; no positive law having been enacted by Congress prescribing a single and complete system of either weights and measures or of value. In these matters the several States have exercised a jurisdiction—each as an independent sovereignty, not contemplated

by the Constitution, if not in violation of its express provisions; for when in its first article above quoted, the right was conferred on Congress, the **duty** of exercising that right was also imposed, from the very necessity of the case.

Let us see now what Congress has done towards fulfilling its duty in this behalf. By act of Congress of May 19, 1828, it was provided that that certain brass troy pound weight procured by the Minister of the United States at London, in the year 1827, should be the standard troy pound of the United States for use in the mint for coinage purposes. By resolution June 14, 1836, it directed the Secretary of the Treasury to cause a complete set of all the weights and measures "adopted" as standards and then made or in process of manufacture for the use of custom houses and for other purposes, to be furnished to the Governor of each State in the Union, etc., "to the end that an uniform standard of weights and measures may be established throughout the United States."

The Legislature of Pennsylvania had by an act of April 15, 1834, adopted the troy pound above referred to and also enacted that the positive standards then in use should for verification be referred to "natural invariable standards." Thus the length of the standard yard to be compared with that of the pendulum vibrating seconds, etc., and that of weight to be compared to that of 100 standard cubic inches of water at its maximum density and at convenient atmospheric pressure, etc.

By an act of July 28, 1866, Congress legalized the metric system throughout the United States—not however making it compulsory and declared what the equivalents of the terms of the weights and measures **then in use** in the United States were in the metric system. By act of February 12, 1873, Congress substantially re-enacted the law of May 19, 1828, relating to the troy pound for the regulation of coinage. By act of July 11, 1890, Congress provided for the repair of the standard sets. By act of March 3, 1891, it established the National Bureau of Standards. By act of July 12, 1894, it defined and established units of electrical measure, and by act of August 18, 1894, it provided for replacing lost sets of standards.

Now, aside from our electrical standards, what systems of weights and measures have we in use in the United States and what claims have they upon science for their characters?

That no one system is compulsory is obvious from the fact that there are at least three distinct and independent systems of weights (not counting apothecary's weight) now in daily use, to-wit: the troy, the avoirdupois and the metric. A grain of wheat is the fundamental scientific (?) unit of the first two and a subdivision of the polar circumference of the earth, call-

ed the meter, is that of the third. The grain is also the fundamental unit of length in the old systems where the standard unit of length is the yard of 36 inches; since the inch when referred to its fundamental scientific (?) basis is the length of 3 barley corns or grains of barley.

But what matters it whether the fundamental unit of weights and measures consists of a natural or an artificial object? The question suggests its own answer. Fixity is the primary consideration. The difficulties in the adoption of a terrestrial dimension either of circumference or diameter, or of its mass or attractive force operating upon the pendulum are disclosed by Sir John Herschel in his interesting lecture on "The Yard, the Pendulum and the Meter," read at a meeting of the Leeds Astromical Society October 27, 1863.

It is a matter for profound meditation that though we go to the ends of the earth or to the center thereof, there is nothing so absolute and fixed in dimension that it may be referred to as an absolute standard of length, but that with all the science and skill of the twentieth century every measurement has some element of variability in itself or in the means of its adoption as a standard. I apprehend, however, that our inconvenience from this fact at this time is more imaginary than real; as for practical use, the metric system as now established, is adequate for all purposes of measurement of distance, dimension, capacity and weight, except perhaps as applied to the stellar universe. It is a decimal system and far more convenient in reckoning than any of the old forms which it has well nigh displaced in all civilized countries except Great Britain and the United States.

If any of the nations of the earth will approximate the precautions provided by the International Commission of 1870 to preserve copies of the standards then provided, there will never be occasion for a resort to the actual length of a meridian of the globe to determine the length of the standard meter.

How long must it be before Congress will exercise its sovereign function in this behalf and abolishing and forbidding the use of every other system, establish the metric as the sole and only lawful system? Why should not Congress say to the people of the United States what the great law-giver did to the Israelites, "thou shalt not have in thy bag divers weighs, a great and a small. Thou shalt not have in thy house divers measures, a great and a small. But thou shalt have a perfect and a just weight and a perfect and a just measure shalt thou have."

The people of the United States are far behind the an-

cients in this matter, for we have in daily use an avoirdupois pound equal to 7,000 grains; a troy pound equal to 5,760 grains and a kilogram equal to 15,432.2 grains. Also a yard equal to 36 inches as a standard unit of length and a meter equal to 39.37 inches as another standard unit of length. Similar confusion exists among the other weights and measures growing out of these. It is obvious therefore that Congress has something yet to do in this matter.

But there is still another measuring system that I have thus far but little more than metioned, which in importance transcends all the others, inasmuch as it is used more than any or all of them combined—that of money.

From the earliest history of commerce, a standard of value has been as interesting and important a subject as that of length, aye, vastly more so; and though the diversity of weights and measures has been as great as that of tongues at the Tower of Babel, the variety of standards of value both as to quality and quantity exceeds them all, and to this very hour the crudest, most antiquated and unscientific measuring system in use is that for determining commercial values. I say commercial value to distinguish the values under discussion from intrinsic values in general; embracing in the former only such values as are possessed by objects which are limited in supply and in demand for use.

It is needless to say, except for illustration, that iron, cattle, leather, shells, beads, tobacco, skins and doubtless many other things, as well as copper, silver and gold, have at one time or another and in one country or another, been used as a medium of exchange and standard of value. Gradually one thing has been succeeded by another, until at last gold has superseded all other materials in the greater commercial countries, and with the exception of silver it has displaced all others throughout the civilized world.

The superiority of its qualifications over those materials which it has displaced as a standard for money, is only in degree. It is more limited in supply than iron; more divisible than the ox; more durable than leather; more beautiful than tobacco; more useful than shells or beads, and less ebundant than copper or silver. It is of great use in the arts. Between gold and silver there is still a struggle for the mastery; one must win and that upon its merits. It is obvious to me that two separate and distinct standards of value cannot exist harmoniously and on equal footing in any country at the same time. It is impractical and scientifically and absolutely im-

possible. No man can serve two masters and love and serve them both equally. No more will a people hold in exactly the same estimation any given quantity of two metals upon which the law of supply and demand is constantly acting, with varying supply and demand of each, having no fixed relationship to the supply or demand of the other.

It is my conviction at this time, that where gold has become the sole standard of value, as in the United States and most other great commercial countries, a change from a gold to a silver standard would work immeasurably more injustice and wrong than will be done by perpetuating it. Changing from one standard to another is practically the same in its injurious effects as increasing or diminishing the amount of the standard material of which the unit of the money system is composed.

My audience needs no enumeration of instances in which incalculable injustice has been perpetrated upon a people by each of these methods—no less in our own country than those of others; and the injustice is none the less, whether the perpetration was through ignorance or design.

The question with us now is, can we set up any barrier to a repetition of these crimes against unsuspecting or otherwise helpless humanity?

As I think I have clearly shown, Congress has been woefully derelict of duty in failing to fix the standard of weights and measures. It has been doubly so in failing to fix the standard of value. The clause of the Constitution before quoted says "The Congress shall have power to coin money, regulate the value thereof and of foreign coin and fix the standard of weights and measures." I hold that therein is embodied authority over the money system of a two-fold nature, either of which is ample and if properly exercised, as contemplated by the mind that inspired the framing of that article, we may have a money system having as scientific a basis, and answering the purpose for which it is designed, as perfectly as the metric system of weights and measures. In this matter, as in the other, Congress has entered upon its duty and done something —perhaps we may say much—for at an early day it established a mint and entered upon the duty of coining metal money, and this right and duty too it exercises exclusively. Congress has also in 1873 adopted a standard of security, a unit of value, consisting of 23.22 grains in weight of gold, coined with alloy into a one-dollar piece weighing 25.8 grains. This after a period of nearly a hundred years, during which time commerce had struggled under the incubus of a double standard—in theory at least—while in fact preference has alternately shifted

from silver to gold and from gold to silver, as the ratios between supply and demand for the two metals has varied.

It is a debatable question whether, owing to the limited supply of both gold and silver, a standard of security and unit of value consisting of an alloy of gold and silver might be adopted which would answer the needs of commerce better than one consisting of either of them singly, and which would endow both metals with the dignity of the standard without the distracting complications resulting from the preposterous attempt to use two distinct and separate standards at the same time; but I do not wish here to more than offer the suggestion as a subject for future consideration.

I have mentioned gold as the standard of security in this country. Gold as such is not money. Coining it, stamping it as directed by law, endows it with a function which it does not otherwise have. As coin, it is money, a lawful medium of exchange and compulsorily receivable in payment of debts—a legal tender.

We have also silver coins, the alloyed unit of which contains 412½ grains, but these silver coins are only a legal tender where not otherwise expressed in the contract and the security they carry is less in dignity than that of the gold coins inasmuch as the difference between the bullion value of the silver in the coin and its nominal value is made up of the credit of the government—its ability and willingness to redeem the silver coins by receiving them in payment of debts to the government at their nominal value or by exchanging gold coin for them. And this is about the extent to which Congress has gone in assuming and exercising this sovereign prerogative, the establishment and maintainance of the money system of the country.

It has, however at divers times caused the credit of the government to be coined into paper money, of which the so-called greenback is the most popular example, but it has farmed out to private corporations this inestimable prerogative of its sovereignty to such an extent that a large proportion of our current money is issued by these corporations for their personal and exclusive advantage and with baneful results to all the other branches of business fully commensurate with the motive.

As reported in the daily papers, President Roosevelt, in his speech at Quincey, Ill., on April 29, 1903, described the unsatisfactory working of our currency system and pointed to results still to be striven for, with a clearness characteristic of the man, and which I will quote as a starting point for the next division of my subject. He says:

"Our currency laws have been recently strengthened to secure permanency of values, but this does not imply that these laws may not be still further improved and strengthened. It was well nigh universally admitted that our currency system is wanting in elasticity; that is, the volume does not respond to the varying needs of the country as a whole, nor to the varying needs of different localities. Our people scarcely need to be reminded that grain raising communities require a larger volume of currency at harvest time than during the summer months. The same principle applies to every industry, to every community. Our currency laws need such modification as will insure the parity of every dollar coined or issued by the government and such expansion and contraction of our currency as will promptly and automatically respond to the varying demands of commerce. Permanent increase would be dangerous. Permanent contraction is ruinous, but the needed elasticity must be brought about by provisions which will permit both contraction and expansion as the varying needs of the several communities and business interests may require."

"The Congress shall have power to coin money, regulate the value thereof * * * and fix the standard of * * * * measures."

Money is the measure of value. Congress has declared what the material and the quantity thereof shall be the unit of value, but it has not declared what the value of that unit shall be nor provided means for regulating it nor the standard money of which it is the touch stone.

Webster defines value to be "the property or properties of a thing which render it useful, or the degree of such property or properties." And this is the sense in which the word value is used in money, as in all other things of commerce. A standard in the sense in which we are using the word means a thing with which other things of its kind are compared. It is the ultimate and last resort in determining distance, weight, capacity or value, as the case may be.

It is written that in His promise to Abraham, God swore by himself because there was none greater. So also is a fixed standard measured by itself, because there is none of greater authority. In regulating the value of money, the States, now forty-five of them, to say nothing of the territories, each for itself, has exercised the prerogative of regulating (or disturbing) the value of money; for each State has, without any protest from Congress, but rather with its sanction and approval, established a maximum rate of interest, which is lawful to

charge, by the money-lender or creditor, although in some States the rate in matters of contract is purely a subject of mutual agreement.

Congress has never established an exclusive and uniform rate of interest; on the contrary, in enacting the law relating to national banks it expressly provides that in matters of interest the banks may charge the rates allowed by the laws of the States and territories in which they may be severally located, and 7 per cent. where no other rate is established.

Now what is interest, and what has it to do with our subject? Interest is the premium paid for the use of money. Money, like every other useful thing, is subject in its value to the law of supply and demand, and interest on money denotes the ratio between the supply of and demand for money, and as applied to our unit of value, it means, for example, that with interest at 7 per cent. per annum for the use of $100 for one year the borrower will pay the lender, together with the principal, $7 more in gold coin or its equivalent in money of the same value. There is no fixed rate of interest in this country, nor in any other that I know of, and no fixed value to our standard unit of value. There should be, and if our money system ever reaches even the scientific exactness of the metric or any other of the prevailing measuring systems there must be further legislation to that end. If gold or even gold and silver were the only elements that netered into our currency it would be practically impossible to establish and maintain a rate of interest that would not be violated in commercial transactions. The supply being limited and the material composing the currency being subject to corners and monopoly, any demand for money exceeding that indicated by the legal rate of interest would be taken advantage of by money lenders and those needing the use of borrowed money would be forced to pay the excessive and usurious rate or go to the wall in their business.

In fact these are conditions existing this very hour in thousands of places and have been so at all times and at various places ever since money was invented; although during the past few hundred years a substitute for metal money has been in use in company with metal money of such excellence and adaptability that without it commerce would lapse into a state of barbarism—I mean coined credit or so-called paper money. Without this it would be idle to talk of fixing the rate of interest or regulating to any adequate degree the value of money. With it the field is clear and the way open. Money, as I have said, is subject in its value to the law of supply and demand. The demand for money at some rate could not be goverened by human legislation and ought not to be if it could.

It is in the supply of money—currency— that the means lie for not only regulating, but fixing the value of money. As I have said of standards of weights and other measures, absolute fixity is seemingly impossible in anything; but with the value of money as with the length of the meter, there is a possibility of such fixity as will render money at least approximately as perfect a standard of value as the meter is that of length. As stated by the President in the speech before quoted, our currency system is wanting in elasticity. That is what has been the chief ailment of our money system from the very first. The justification of the government for authorizing private banks of issue is and has always been to provide elasticity to the currency, ad it has done so admirably—for the benefit of the money lenders, but a sorry substitute for government regulation and control; as is demonstrated in the fact that money is never supplied to meet the demand at the same rate of interest in two places at the same time, and not so in any place for any considerable length of time. Money on call in New York at 4 and 6 per cent today; last fall it rose to 100 per cent. While the great farming country of the West was being reclaimed by the pioneers, money loaned readily at from 25 to 50 per cent, and throughout the entire country the rate of interest has always been—like the freight rate on the railroads—"all the trade would bear."

It was only last fall that the Secretary of the Treasury deemed it his duty to strain every authority conferred on him by law to avert a money panic, which had it come, would only have been one more in the catalogue of panics which have broken upon the commercial world to the cost of untold misery, injustice and ruin. To depend upon such means to regulate our money values is as foolish as to try to dam the Mississippi river to avert a flood. To say nothing of the inconsistency and injustice of granting to private persons or corporations the exclusive right of issuing money—charging interest on what they owe—it is vain to expect or hope for a supply of money from that source that will properly meet the demands of the other branches of commerce at a just or at any rate of interest. It is contrary to the laws of nature; for the law of supply and demand is as much a natural law as that of gravitation, and self love is at the bottom of every voluntary human action. There is no motive but that of self-love or selfishness that moves the money lender to part with the use of his money and the despotism and tyranny of Shylock is ingrain in human nature, daily manifesting itself in varying degrees, but nowhere more conspicuously than in the issue and manipulation of paper money.

Fixing the rate of interest is but one step necessary toward an elastic currency. There must be provision made for issuing, coining paper money to meet the demand at that rate. What hope have we or can we have of private so-called National Banks providing such facilities? None whatever. It is puerile to say that the government can authorize to be done by another that which it cannot do by itself; and it seems to me little less than treasonable for Congress to give to private persons or corporations the sovereign function of issuing money, which in the very naure of man, cannot be exercised by them other than for their private advantage at the expense of the rest of the community. The government should reclaim this abdicated power as inhering inalienably in the people and using the same or similar machinery as now employed by the banks, take upon itself the duty of issuing all the money by loaning it as the banks now do on proper security and on demand, but at a fixed rate of interest. By this method the demand for money would alone cause an increase or a lessening of the volume and commercial prosperity would depend upon the demand for and supply of the other commodities of use, and not upon the manipulation of the money market. The invention of coined credit was an inestimable boon to mankind. Let it continue to be such and not alternately a blessing and a curse. Were it not that the value of gold is immensely enhanced by its use as money and that by the same power that authorizes the use of coined credit, there would be no means of regulating or fixing its value, but since paper money simply supplies the currency so far and only so far as the supply of gold and silver money is inadequate, it is within the power of Congress, measurably, at least, and with the co-operation of other gold-standard countries, substantially to fix its value by fixing the rate of interest and providing credit money of the same value to meet the demands of commerce at that rate.

What such legislation and such a money system would mean to all industries can scarcely be measured by the imagination, and what a just rate of interest would mean to the wage earner is a theme worthy of a more extensive consideration than can properly be given here and now. Knowledge grows and as we see our present systems of weights and measures and of money are the outgrowth of cruder and more cumbersome beginnings, let us hope that the first quarter (may I say decade?) of the twentieth century will see in this country, at least, one exclusive system of weights and measures and a money system based upon scientific standards that do not vary, to the end that justice and righteousness may prevail among men.

SOME STARTLING STATISTICS AND THEIR WARNING

BY ALVIN H LOW

Author of "Land, Money and Highways: Evils and Remedies," "Leaves from My Note Book," "The War and Economic Justice," Etc., Etc.

It has been well said, "Figures don't lie, but you can lie with figures." The writer is not responsible for the accuracy of the statistics given below, as they are copied from the U. S. Statistical Abstract.

"Statistical Record of the Progress of the United States, 1800 to 1915."

Note—"True value of real and personal property; the figures are those of the Bureau of the Census, Department of Commerce, relate to continental United States, and cover census years."

Year 1850—Total wealth,	$ 7,135,780,000;	per capita, $ 307.69
Year 1860—Total wealth,	$ 16,159,616,000;	per capita, $ 513.93
Year 1870—Total wealth,	$ 30,068,518,000;	per capita, $ 779.83
Year 1880—Total wealth,	$ 43,642,000,000;	per capita, $ 870.20
Year 1890—Total wealth,	$ 65,037,091,000;	per capita, $1,035.57
Year 1900—Total wealth,	$ 88,517,307,000;	per capita, $1,164.79
Year 1904—Total wealth,	$107,104,212,000;	per capita, $1,318.11
Year 1912—Total wealth,	$187,739,071,000;	per capita, $1,965.00

The foregoing figures indicate an abnormal increase from 1900 to 1912. On consulting Table No. 347, we find that the total increase of value of Real property from 1900 to 1912 was $58,139,704,907.

These figures seem to show that by 1900 we had reached the limit of free land; that is, land that is most desirable for useful purposes, and that for the future, land values will continue to rise, by virtue of the law of supply and demand, just about as population increases.

The intrinsic value of Land does not change. An acre of land responded to the labor of man in 1492 as generously as a like acre responds to like treatment in 1917. The available land of the Earth is limited in supply. Measured by the money standard, the value of a given area will increase with increased demand due to increase of population and improved methods of cultivation.

In round numbers, the population of Continental United States in 1850 was twenty-three million; in 1900 it was seventy-six million, and in 1915 it was one hundred million.

Aside from land, there are two factors or things that contribute to the value (usefulness) of things:—live labor, and dead or crystallized labor which we call capital. There is a relentless, never-ceasing war between the possessors of these two factors of production; always has been, is now, and the end is not yet in sight.

The purpose of this inquiry is, to ascertain as nearly as possible, by the use of facts and figures, what share or proportion of the increase of wealth in this Country, has gone and is going to each factor of its production. When we have solved this problem, we will be able to adjust our legislation to it, so as to insure justice to each of these two contending forces;—that done, it will follow as of course, that if we establish justice for either one of them, justice will, by the same process, be established for the other.

Now, discarding smaller fractions, and computing by decades, from 1850 to 1900, we find that the average increase of wealth in the United States was as follows:

From 1850 to 1860, 12.6 per cent; 1860 to 1870, 8.6 per cent; 1870 to 1880, 4.5 per cent; 1880 to 1890, 4.9 per cent; 1890 to 1900, 3.6 per cent; and from 1900 to 1904 it was 5.3 per cent and from 1904 to 1912 it was 9.4 per cent.

Other things being equal, and reckoning a family of five persons is the

unit of well organized society, each family in the periods above mentioned should have possessed wealth as follows:

In 1850, $1,538; in 1860, $2,570; in 1870, $3,899; in 1880, $4,351; in 1890, $5,178; in 1900, $5,824; in 1904, $6,591; in 1912, $9,825. Unfortunately for the purposes of this inquiry, we have no authentic statistics up to the year 1913 from which to calculate the rate at which the wealth of this country has been centralized, exploited or pilfered from the many into the possession of the few, as it surely has been, as demonstrated by the Personal incomes accounted for by the sworn statements of individuals in their returns to the Federal Government for the years 1913, 1914, 1915 and 1916, as per the report of the Commissioner of Internal Revenue, which is as follows:

For the year 1913, out of the one hundred million or more people in the United States, only 357,598 returned net incomes of over $3,000 per year. Of these, 84 persons had net incomes of $300,000 or over; 44 had net incomes of $400,000 or over; 91 had net incomes of $500,000 or over; and 44 had net incomes of $1,000,000 or over; the record stops there. In the year 1914 the number of returns fell to 357,515 while the larger incomes increased and were as follows:

There were 147 net incomes of $300,000 or over; 69 of $400,000 or over; 114 of $500,000 or over and 60 of $1,000,000 or over.

In 1915 the total number of returns of over $3,000 fell still more to 336,652 while the larger incomes had risen in numbers and were as follows: There were 254 net incomes of $300,000 or over; 122 of $400,000 or over; 209 of $500,000 or over; and 120 of $1,000,000 or over.

In the year 1916, while the total number of returns over $3,000 rose (probably due to some increase in salaries), to 437,036, the number of swollen incomes rose still higher and were as follows: There were 469 net incomes of $300,000 or over; 245 of $400,000 or over; 376 of $500,000 or over, and 206 of $1,000,000 and over. Of these 206, ten had net incomes of five million dollars and over! It is said to be a safe guess, that as late as 1860 not more than one man in the United States possessed one million dollars worth of property, much less a yearly income of that amount; and today it is popularly believed that many single individuals here have net incomes of from five to fifty million dollars annually.

On the other hand, Government statistics of the industries show that the average wages of the American laborer does not exceed $500 per year. And this is his **gross** income. He has no **net** income, and for many years he has been drawing on his previous savings to pay his current and necessary expenses.

With these undeniable facts staring us in the face, and which almost stagger our credulity, is it not high time that our statesmen and our scholars, our philanthropists and our philosophers, and our citizens generally, begin to look into these matters and try to find a way to check the current of our economic life, and turn it into channels of safety?

As a further verification of the statements made, take the facts disclosed on page 692 of the same Abstract. This table shows the total number of persons employed in the "Manufacturies of the United States," at the periods mentioned, and the total amount of wages paid; which divided by the total number brings the following results:

The average wages for each wage-earner per year was: In 1850, $247; in 1860, $239; in 1870, $477; in 1880, $347; in 1890, $445; in 1900, $426; in 1905, $437; in 1910, $518.

In the same industries, as shown by the same table, the average **salaries** paid to "officials, clerks, etc.," were as follows: In 1890, $850; in 1900, $1,045; in 1905, $1,106; in 1910, $1,188.

Now, what of Transportation, Agriculture, and Mercantile pursuits? In 1910 the railroads paid $1,143,725,300 to 1,699,420 persons in salaries and wages, which is equal to an average of $673 to each.

In 1910 the total number employed in Manufacturing and Railroading was 9,104,733. In 1910 there were 12,659,203 persons engaged in Agriculture. This leaves 16,403,396 people "engaged in gainful occupations" to be accounted for and the Government statistics give us little or no light as to their yearly incomes, but there is good ground for estimating that they fall far short of those we have specified. The annual wages of farm laborers are proverbially low,

and yet, if the average farmer charged up to the account with his farm, wages of himself and family, and the current rate of interest on the value of his investment, were it not for the nominal increase in the value of his land, at the end of the year he would find himself "in the hole." Since, then, our industrious population, generation after generation, have received of the fruits of their toil, barely sufficient to enable them to live and propagate the species, to whom **has** gone the increase of wealth of which we boast, if not to the exploiters of the race, revealed to us by the Income Tax law, and whom that law has uncovered and made to stand out in all their hideousness?

The logical and inevitable conclusion from the contemplation of the facts presented is, that there is a power latent in crystallized labor—Capital—which, while in the hands of private monopolists, must be regulated and controlled by the Government, if we would abolish the slavery now existing, and which, if neglected, will lead to a revolution as much more terrible than that in France in 1789, as the education of the masses here is more general than it was there at that time.

At this stage of our investigation, the logical question, "What is the remedy?" forces itself upon us. Fault-finding is futile and is often carried to criminal lengths, when the one who complains, with vision however clear, has no practical remedy to suggest. It is much easier to see things as they exist, than as they ought to be.

For the past thirty years the writer has thought he saw the remedy and has advocated it untiringly, which, if it had been applied even twenty-five years ago, would have prevented much of the injustice which has been perpetrated upon the workers of this country, and caused the great disparity between the few very rich and the many very poor, which has almost reached its climax and must be arrested soon, if we are to avert the impending crisis and revulsion.

That remedy was and is, that Congress determine, through the services of a **Federal Interest Commission,** or otherwise, what is a just and equitable rate of interest and profit for money loaned, payments deferred, and capital invested, and to enact that as the legal rate and make that rate **normal** by providing a supply of money to meet the demand at that rate.

That done—and current legislation is tending in that direction—the Government should require an accounting of all Big Business from that of bankers to bakers, and take by taxation, as in the case of the Federal Reserve banks, all excess of the profits above that rate. There is a **motive** (generally selfish) for every voluntary human act. The law suggested, would leave no **motive** for oppression by low wages or extortion by high prices, and where there is no wrong motive there will be no wrong committed.

The feeble action of the Government in taxing "excess" profits and swollen incomes simply as a foreign war necessity, should be applied more vigorously, and as a preventive of injustice, and as a much needed **domestic** war measure; for no foreign war can be more worthy of patriotic solicitude than the war between Capital and Labor, which is waging in every civilized country and most intensely in this, by Nature, the most favored one on Earth; and which must and will continue until Justice has been established in our economic and industrial system. Let us continue to a successful issue our fight for world democracy, lest all liberty be lost for a thousand years; at the same time let us legislate for political equality and industrial justice at home.

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Standardize Capital, Not Wages

BY ALVIN H. LOW

Attorney-at-Law, and Author of "Land, Money and Highways: Evils and Remedies"; "Poverty, Interest and Wages"; "The War and Economic Justice"; "Some Startling Statistics and Their Warning," Etc., Etc.

Seeing in a daily paper, the name of Senator Warren G. Harding among the thirteen who voted against the "Overman" bill April 29, 1918 (the vote standing 63 to 13), recalled to the writer's mind the statement of that gentleman, in his opening campaign address in June, 1916, in which he stated: "We are willing to standardize the wages of the world"; which statement was the inspiration of an article in the "National Jeffersonian" of June 24, 1916, and here revised and enlarged to meet the present-day occasion

This sentence sounds to the writer like the echo of the "Hazzard Circular," sent by the bankers of Europe to the money-lenders of America during the Civil War, practically proposing to substitute wage slavery for chattel slavery, as the more economical system for those in control of capital—the money system.

Adam Smith, whose "Wealth of Nations" is to the science of Political Economy what Sir William Blackstone's "Commentaries" is to the Common Law, said: "Labor, like commodities, may be said to have a real and a nominal price. Its real price may be said to consist in the quantity of the necessaries and conveniences of life, which are given for it; its nominal price in the quantity of money. The laborer is rich or poor, is well or ill rewarded in proportion to the real, not the nominal price of his labor."

Now, measured by this great writer's standard, there were, just prior to the outbreak of our war with Prussian Autocracy, millions of our sovereign American citizens and their dependents, who were in more abject slavery and squalid want, than were the four million chattel slaves in 1860; and all this was the outgrowth of some fifty years of strictly partisan control of the political government since that time. There are two ways to standardize wages; the one by statute law, the other by the law of supply and demand. Three instances of the former method will suffice here—the other we have with us. After the plague known in history as the Black Death, in England, in the year 1349, from which nearly one-half of the laboring class died of the plague, Parliament enacted "the statute of laborers," in which the prices to be charged laborers for their services were specified, and severe penalties were prescribed for charging or receiving more. As might have been expected, the great injustice of this law caused a loud protest, and finally an uprising of the laborers, which came near to the overthrow of the government. The second example is that of the law of the Massachusetts Bay Colony in 1633, which, by the action of the general court, made it a rule that wages in a long list of trades and occupations should not be more than a price or wage fixed by the court. "The rates of inferior workmen," says the historian, "were to be fixed by the constable" The third and most modern method of standardizing wages is that in vogue in the Southern States, prior to 1863, and known as chattel slavery, where either by statute law or by the common consent and decree of the Masters, the laborers were paid or allowed sufficient food, clothing and shelter, to keep them in good health and able to **work and breed,** with the same tender care, and for the same reason, as was given to the domestic horse or ox

It is immaterial to the purpose of this article, what specific price or wage was fixed upon in any of these cases: the point of emphasis being, that wages were standardized by statute law.

Popular sovereignty, even as incomplete as we know it today, was not known or even thought of in those days. The political power was in the keeping of the rich, and hardly questioned by the poor or laboring classes.

Standardizing wages by law, is saying what specific part of the proceeds

of a business shall go to the laborers employed. What is left of the gross proceeds, after the payment of wages and other expenses, if any, goes to the capitalist—a part as his wages for superintendence, and the balance as profit or compensation for the use of his capital. If the wages fixed by law, however, will not leave a profit to the capitalist there will be no business, for that would leave no motive for him to engage in or to continue the business.

As we have seen, under the system of standardization of wages by law, the laborer must subsist and prosper, if at all, on his specific wage; and if he is ever to become a capitalist, he must pinch off a surplus and lay it by out of his wages, for he has no chance for a profit over and above that, while he is simply a wage-earner; and the possibility of his doing more than live and propagate his kind is dubious, since his wage is prescribed by the capitalist in control of the legislation.

Now we come to the other method of "standardizing" wages—the method in vogue in this country, and elsewhere throughout the world.

This method is inaugurated and conducted by the capitalists—the employing class—without the use of, or in direct violation of statute law. They recognize and are familiar with the law of supply and demand, and conform to it with scrupulous respect.

For many years we have had a "protective tariff," for the exclusive protection of American manufacturers. fixed and maintained by the manufacturers themselves, but under the false pretense of its being for the benefit and protection of American Labor; while all the time that tariff has been in force, the doors of this country have stood wide open for the immigration or importation of oppressed laborers of other countries who have come in swarms and glutted our labor markets, so that there has not been one year in fifty, up to the commencement of the present war, that there has not been two or more laborers competing with each other for every job—in consequence of which, wages have been forced down and down, until the gross income of the head of the average family of five persons did not exceed five hundred dollars per year in gold; and a given amount of gold today is less in exchangeable value than ever before in the history of the world. Apply this fact to the standard set by Adam Smith above quoted, that "the laborer is rich or poor, is well or ill rewarded in proportion to the real, not to the nominal price of his labor," and it will be seen that the American wage-earner is as much a victim of "standardized" wages as though his wages were fixed by statute law.

The trades and labor unions are the only influential organizations at work with any degree of power, against this tendency to force down and keep down the wages of labor to the very least that the wage-earner can subsist on, without even a decent regard for the comfort of himself and family.

While Union labor has done much in certain quarters and in certain branches of industry, through a limited control of the labor supply, it has been and is too weak to cope with the whole capital and labor problem, because capital can always survive unemployment longer than can labor; and with the hosts of the unemployed swarming our labor markets, the wonder is that the unions have been able to do as much for the interests of the wage-earner as they have.

Let it not be forgotten that this is the wage-system which has had the "protection" of one Political party for so many years, and which party is, according to its distinguished spokesman, Senator Harding, "willing to standardize for the world." What about capital in the mean time? Is that to remain free, as heretofore, to reap all the profits of the industries?

How long will the enlightened citizens of the United States stand for this system? How long will we continue to trust leaders who have, through avarice or ignorance, betrayed us so long?

The astounding disclosures of recent Income tax returns, showing the colossal fortunes owned by our "captains of industry"—all of which have been acquired within the past fifty years, together with their natural accompaniment of poverty, squalor and suffering of a great mass of our population, is an indefensible indictment of our industrial system. It has long been the theory of the author, that **the principal bone of contention between**

Capital and Labor, and which demands immediate consideration, is the profits derived from their combined employment in the several industries;—and that **there is not, and never has been, a uniform, scientific, practical or just standard established by law or otherwise, whereby a just division of such profits must be made;**— and he presumes to suggest and urge the establishment of such a standard.

THE BETTER WAY

Congress should ascertain, by every means available, through the services of a Federal Interest Commission, if necessary, what are just rates of interest for the use of money loaned and payments deferred, and of profits for the use of capital invested, and establish the same by a general law.

It should be obvious to the most superficial student, since there are only these two factors of production and distribution, that if the standard fixed for one of them is just, it must be equally so to the other. Fixing an arbitrary standard for wages has never been and never can be just, when applied to Labor alone; but by fixing the standard for Capital, Labor will derive its just benefits automatically: for, what is left of the surplus after Capital has received its just share, will go to Labor as a matter of course, and be equally a **just** share.

Such law, to be practical and just, must be accompanied by a supply of money sufficient to meet the demand for money and capital at such rates.

Congress alone has the constitutional power and right to establish such rates and to provide such supply. Will it do so? The legislation enacted during the present Administration in the interest of Labor, inspires the hope that the good work will be carried on, until the goal outlined above is reached.

While we must not for one moment, slacken our prosecution of the war against the German government, we should lose no time or opportunity in adjusting our industrial system at home, so that when we shall have achieved world-wide democracy politically, we may set the pace in the establishment of Social and Economic Justice.

Just laws for the taxation of Inheritances, Incomes and excess-profits, will amply serve the purpose of making normal the standards adopted.

To foretell the beneficent effect of such a system, would require another leaflet; the author prefers, therefore, for the present at least, to leave thus much to the imagination of the thoughtful reader.

Criticism and correspondence solicited.

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THE WAR AND ECONOMIC JUSTICE

By ALVIN H. LOW

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The science of political economy is getting some valuable object lessons in the measures employed by the several Governments engaged in the international war now waging, which, it is devoutly to be hoped, will enable mankind to solve the problem presented by Labor and Capital in their perennial strife over the profits of the industries, for in its last analysis that is the one bone of contention between Capital and Labor, and is reflected in the wars between nations, economic supremacy being the goal sought in the one case no less than in the other the world over.

Political economy has been well defined by one of its eminent professors as "the science of national housekeeping," and that nation is least prepared to direct the order of international housekeeping whose own house is not in order.

It seems to be a popular opinion that the natural law of supply and demand has been abrogated or else was never more than a myth, anyway. The basis of this misunderstanding is found in the operations of monopolies, which, by their power, due to centralization of wealth and executive ability, destroy free competition and fix wages and prices as arbitrarily and despotically as the completeness and magnitude of their organization enables them to exercise, and always to the one end—the exploitation of the community at large for the aggrandizement of the few.

The law of supply and demand, being a natural law, is no more repealable than the law of gravitation. The monopolist and his skilled attorney know this, and avail themselves of their knowledge by conforming to that law, by addressing themselves to the supply factor, the demand being beyond their control.

A monopoly may place the price of a commodity within its control so high that there is no apparent demand for it, but if it is a commodity known to be useful, capable of contributing to human happiness there will be a demand, though only latent, not rising to the price fixed by those in control of the supply. A price fixed higher than the trade will bear is simply prohibitive, and that prices under "free competition," no less than under monopoly, will, on the average, be held at all the trade will bear goes without saying. Competition aims at monopoly, and though trade be started with free competition, nominally, it soon becomes apparent that the battle is to the strong, and the weaker gradually yield, and the survival of the fittest, as among the lower animals, is the survival of the strongest and most cunning, no ethical element entering into the contest.

Now, it should be obvious to the most obtuse that if one of the factors of the production of supplies receives more than a just return in profits, an unreasonable and inequitable net income, it inevitably follows that either the other factor is receiving less than its just share, or else the community from which comes the demand and is being exploited in the name of service is paying too dearly for its supplies.

In every commercial country competition at its best is only an unequal struggle between weak individuals and stronger combinations, whose advantage too often consists in superior system and greater economy, which, if left without Government restraint, become masters of the field, with all the abuse of power which that mastery implies; therefore, it becomes imperatively necessary to a political democracy founded on justice that the Government—which is the greater and should be the most powerful monopoly, in which every citizen is, potentially, a stockholder—should so regulate and control all other combinations and associations of a monopolistic character in a way to preserve all the economies and just advantages of "Big Business" and to eliminate all the wrongs and

injustice certain to exist in the absence of such restraint.

Let us examine briefly recent acts of our own Government, and some of those of other countries, in the nature of regulation and control of "Big Business," pointing toward the goal which it should be the object of every nation to reach. The question which first presents itself is:

"What is a just rate of interest or profit (almost synonymous term) for the use of wealth employed as capital?"

Every State and Territory in the American Union has, as a necessity, in the absence of Congressional action, assumed the right and duty to prescribe a legal rate of interest, notwithstanding the fact that none of them has the constitutional power to coin money or supply the same, or fix the value thereof, a right reserved exclusively to Congress. The lack of uniformity of such rates is proof sufficient that there is no standard rate fixed by Federal (the only competent) authority. The nearest approach to fixing a rate by Congress is found in the law relating to National banks, which prescribes that, in the absence of a State law fixing a rate, wherever a bank is located, the legal rate shall be 7 per centum per year.

Judicial legislation has been equally fickle and indefinite. As familiar examples we have the decision of the United States Supreme Court, rendered January 9, 1909, in the suit of the City of New York and others against the Consolidated Gas Company, where it was held that a service rate fixed by law which will yield the company a net profit of 6 per cent a year on its business **is not confiscatory.**

In the suit of Simpson vs. Shepard, the celebrated "Minnesota Rate" case, decided June 9, 1913, quoting briefly from the text: "Nor, in the absence of Federal action may we deny effect of laws of the State enacted within the field which it is entitled to occupy until its authority is limited through the exertion by Congress of its paramount constitutional power."

Now, quoting the syllabus: "13. A State may not fix the intrastate rate of an interstate carrier so low that the carrier's entire revenue from all its business in a State, both interstate and intrastate, after paying only operating expenses and taxes, amounts to only about 4 per cent on the value of its property in the State."

It is in rendering the decision of the court (prepared by Justice Hughes) that the court assumes the prerogative of determining what is a "reasonable" rate of profit.

It is the failure of Congress to exert its paramount authority and to perform its obvious duty to fix a standard rate of interlest, and declare a just and reasonable rate of profit, which has made it necessary for the States to do so, resulting in the confusion and instability of those matters, to the great detriment of commerce and perpetuating the strife between Capital and Labor.

So far as is known to the writer, no government has determined and fixed a rate of interest and profit as the result of scientific investigation. Every act of government on the subject has been arbitrary and in defiance of the law of supply and demand, and correspondingly abortive from the standpoint of justice.

Section 7 of the "Federal Reserve Act" is the most conspicuous attempt of government to limit the profits of "Big Business," in the provision limiting the annual dividends of stockholders to 6 per cent, and taking the excess, if any, by the Government as a franchise tax. These stock holders, however, are the member banks. That provision, therefore, is only "a gentlemen's agreement" that the banks will not exploit each other to exceed 6 per cent, but in their dealings with the general public they remain unrestrained as to the profits they may extort.

The international war has caused the enlargement or extension of the principle discovered in that Regional Bank provision, and not only the United States, but each of the other belligerents—in response to the obviously just demand that property as well as men shall be subject to the draft—has levied a tax on "excess profits" and swollen incomes, without, however, curbing the methods of acquiring those excess profits and unrighteous incomes.

It must be obvious to anyone who thinks that no part of the money taken by taxation from excess profits or

swollen incomes is ever restored to the persons or communities from whom it was originally extorted.

To have **excess,** there must first be **a normal.** A normal profit or income should be just and ethical. The war has brought excess profits so conspicuously to the public view as to create a demand for drastic legislation as a deterrent, and the pity of it is, the Government, as yet, has made no effort to abridge the process of acquiring excess and unrighteous profits and incomes, but has contented itself with exacting a share of the loot, which is, in essence, compounding or winking at a damnable wrong which it is in duty bound to brand a **felony.**

Recent income returns and labor statistics for many years (see U. S. Statistical Abstract) disclose startling facts, which ought to make every American citizen look well to his civic duties, as a matter of self-preservation. For example: In the year 1913 of the one hundred million people in the United States only 357,598 had net incomes of over $3000. Of these, 84 persons had net incomes of $300,000; 44, over $400,000; 91 over $500,000, and 44, over one million dollars. The record stops there.

In the year 1914 the number of returns fell to 357,515, but the larger incomes rose in number as follows: There were 147 in the first, 69 in the second, 114 in the third and 60 in the fourth class, respectively.

In the year 1915 the total number of returns fell to 336,652, and the larger incomes increased in number as follows: There were 254 in the first, 122 in the second, 209 in the third, and 120 in the fourth class respectively.

To speak of the net income of the average American wage-earner is a mockery.

At and for a long time previous to the outbreak of the European war the yearly gross income of the average American laborer did not exceed $400, and today it does not exceed $500, all of which is an appalling object less in wealth centralization.

These facts and figures ought to suffice to show how imperative is the duty of Congress to inform itself as to what would constitute a normal, ethical and just rate of interest and profit and to legislate to establish that rate, and then the tax on excess profits and swollen incomes would take the **entire excess,** not as a dividend of a flourishing but unrighteous enterprise, but as one of the penalties for extortion and unmerciful exploitation, the final object of every private monopoly.

The necessity for establishing such just rate will be made more obvious by the report of the Interstate Commerce Commission, now engaged in taking account of the physical value of the railroads of the country, to be used as a basis for computing service rates, otherwise that arduous work will have been useless, and the Government be left to the unscientific method of regulating freight and passenger rates now and heretofore in vogue.

If it requires the labors of a Federal Interest Commission, which seems probable, to determine what is a just and normal rate of profit and interest, not a day should be lost in creating such commission. When such rate is once determined, it will be the duty of Congress to declare it, and to see to it that a sufficient supply of money and capital is provided to run the legitimate business of the country upon such normal and equitable basis which will go to promote peace betwen Capital and Labor and be a precursor of peace among the nations.

Let us prosecute, with all our might to a successful issue, the war against the despotism of our foreign foe, otherwise the liberty to shape our own destiny and to promote a truer democracy will be lost for a thousand years; but while we fight irresponsible tyranny abroad, let us legislate for greater liberty and economic justice at home.

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